



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

PROCEEDINGS  
OF THE  
American Philosophical Society

HELD AT PHILADELPHIA  
FOR  
PROMOTING USEFUL KNOWLEDGE

VOLUME LIX  
1920



PHILADELPHIA  
THE AMERICAN PHILOSOPHICAL SOCIETY  
1920

PRESS OF  
THE NEW ERA PRINTING COMPANY  
LANCASTER, PA.

# CONTENTS

	PAGE.
Detection of Submarines. By HARVEY C. HAYES, PH.D. ....	I
The Deep Kansan Pondings in Pennsylvania and the Deposits Therein. By EDWARD H. WILLIAMS, JR., SC.D., LL.D. ....	49
The Parallaxes of Fifty Stars (Second List) Determined at Sproul Observatory. By JOHN A. MILLER, PH.D., with the coöperation of JOHN H. PITMAN and HANNAH B. STEELE... ..	85
The Components and Colloidal Behavior of Plant Protoplasm. By D. T. MACDOUGAL AND H. A. SPOEHR .....	150
The Phosphorescence of Renilla. By G. H. PARKER .....	171
The Einstein Theory. By E. P. ADAMS .....	176
Slav and Celt. By J. DYNELEY PRINCE .....	184
Products of Detonation of TNT. By CHARLES E. MUNROE AND SPENCER P. HOWELL .....	194
The Reefs of Tutuila, Samoa, in their Relation to Coral Reef Theories. By ALFRED GOLDSBOROUGH MAYOR .....	224
Golgotha. By PAUL HAUPT .....	237
The High Voltage Carona in Air. By J. B. WHITEHEAD.....	245
A New Theory of Polynesian Origins. B. ROLAND B. DIXON.	261
Correlation of Shape and Station in Fresh-water Mussels (Naiades). By A. E. ORTMANN .....	269
The Distribution of Land and Water on the Earth. By HARRY FIELDING REID .....	313
The Transient Process of Establishing a Steadily Alternating Current on a Long Line, from Laboratory Measurements on an Artificial Line. By A. E. KENNELLY AND U. NABESHIMA	325
U. S. Navy MV Type of Hydrophone as an Aid and Safeguard to Navigation. By H. C. HAYES .....	371
Interrelation of the Fossil Fuels. IV. By JOHN J. STEVENSON	405
Geographic Aspects of the Adriatic Problem. By DOUGLAS JOHNSON .....	512
Certain Aspects of Recent Spectroscopic Observations of the Gaseous Nebulæ which Appear to Establish a Relationship between them and the Stars. By W. H. WRIGHT .....	517